

Reflective Cracking Construction Notes

Date: January 14, 2015

Project: Reflective Cracking Indoor Phase IV

Weather:

	6:54 AM	3:54 PM
Temperature (°F):	26.1	34.0
Dew Point (°F):	19.9	28.9
Humidity (%):	78	82
Visibility (Miles):	10.0	10.0
Wind (MPH):	6.9 N	10.4 NNE
Conditions:	Overcast	Overcast

Working Hours: 7:00 AM – 4:30 PM

Sub-Contractor(s): ARA

Personnel: (1) technician (ARA)

Equipment: Hand tools

Reflective Cracking Construction Notes:

SRA and ARA personnel continued preparing the asphalt surfaces of the North and South Phase IV test items for the installation of surface strain gauges until the test rig motion control incident occurred.

An unexplained error in the reflective cracking test rig motion controls occurred in the late morning. This error caused the South side of the test rig to close from 250 to 0 mils. This movement caused damage to the concrete surface of the rig and visible crack initiation in the base of the asphalt overlay on the inner and outer edges of the South test item and the inner edge of the North test item, as detailed in figures 1a – 1e.



(a) South inner section: concrete surface crack occurred when joint fully closed and both sections collided with each other. Left mounting bracket partly detached from surface.



(b) South inner vertical edge: vertical and horizontal cracks at the joint area.



(c) South outer vertical edge: separation from the concrete surface.



(d) North inner vertical edge: cracks at the joint area.



(e) North outer vertical edge: no evidence of cracks.

Figure 1. Damage Caused by Reflective Cracking Rig Control Incident.